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COMPLIMENTS OF THE WRITERS.

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TUMOR OF THE UTERUS.

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THE following case presented some features which are so uncommon that it is considered worthy of being recorded :—

Mrs. ———, a native of Massachusetts, was, at the time of her death, in November, 1878, fifty-three years of age. She was married when twenty-four. Had been a widow a number of years. Never was pregnant. Menstruation began at about the age of fourteen, and during all her menstrual life was remarkably regular, recurring each twenty-eighth day with but one exception, when after exposure to cold its appearance was delayed two weeks, and then, for the only time in her life, was accompanied with some pain. The flow usually lasted ten or eleven days; was always profuse, but never enough to cause much prostration or give rise to alarm, and never required treatment. She never had much leucorrhœa. Menstruation apparently ceased the January before her death, but reappeared in small amount in July, and again, for the last time, in August.

At the age of twenty-five (one year after marriage), on attempting to move a heavy piece of furniture, she "felt something give way," as she expressed it, and feeling of her abdomen at the seat of the sensation, she for the first time detected the presence of a hard mass of considerable size. This grew gradually larger up to the time of her death. Naturally enough, the lady, when she discovered the enlargement, regarded the strain which she had given herself as its cause, but doubtless the tumor had then existed for a considerable time, and in all probability her muscular effort caused the uterine mass to move, and this gave her the sensation which she experienced.

The tumor did not at this time cause much inconvenience. It was neither painful nor tender, but as it did not disappear, the lady, after a while, took medical advice regarding it, and was told that she had an ovarian tumor. This view of her case she held until a few months before her death, although her family attendant, Dr. Brick, of Worcester, who attended her in her last sickness, has informed me that he regarded the tumor as a uterine fibroid, and supposed that she understood his opinion. She made several changes of residence during her married life, and thus had occasion to employ a number of physicians at different times, but the idea of ovarian tumor seems to have been held by them all, with this one exception. She was a woman of much firmness of character, and when first told that she had an ovarian tumor, took the question of an operation for its removal under consideration (ovariotomy was not then as favorably regarded as now), and, after due deliberation, made up her mind, once and for all, that she would not undergo any operation. This partially explains why, although possessed of ample means, she never consulted a specialist nor any physician expert in such cases. Had she done so, the true nature of her trouble would, on proper examination, have been at once apparent. As it was, the

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wrong diagnosis caused the case to excite much attention in social circles, for she had a wide acquaintance and many friends, and after it was reported that she had an ovarian tumor, and had decided to have nothing done, it was generally supposed that she would die in a comparatively short time. When, contrary to all expectation, she continued to live, it created much comment, and her case was often cited as proving that the idea held by physicians that ovarian tumors were so fatal, if left to themselves, was erroneous. On several occasions, women with ovarian tumors, who had been advised to submit to ovariectomy, hearing of her case, came from a distance to talk with her before making up their minds. How much harm may have been in this way caused by the mistaken diagnosis cannot, of course, be determined.

In 1861 the lady had a severe attack of peritonitis following a journey by rail to New York, being confined to her room some months, and at several other times, after long drives or active exercise, she had attacks of abdominal tenderness, enough to confine her to the house for a few days, but nothing more serious up to the time of her fatal illness. In the last years of her life she had several attacks of renal colic, passing at various times a considerable amount of gravel from the bladder. With these exceptions, her sufferings were mainly those arising from the weight and size of the abdominal tumor, which for years made her larger than a woman at the full term of pregnancy; but, notwithstanding the burden which she carried, she led a much more active life than most women, taking into her own hands the charge of her large country place, and always herself driving her pair of ponies. Some time before her last illness she told me, in talking about herself, that she thought she had had quite as little real suffering as the average of women. She was accustomed to eat but little, as "there did not seem to be room for much." She passed water rather frequently, but, strange to say, her bowels were always remarkably regular.

In the spring before her death her friends noticed that she was not seeming as strong as usual, and during the early heated term of that year she was much prostrated, but on the advent of cooler weather felt better. Still, she did not regain her usual strength. During a friendly visit at her house in the summer, she asked my advice about what she had considered an umbilical hernia. On examination I found at the navel a large mass of varicose veins, evidently caused by the pressure of the tumor. She also had a bulging at the right inguinal ring, which did not seem to be either intestine or omentum, but simply peritoneum. The tumor at this time presented the hard, rounded surface, and characteristic feel of a uterine fibroid, and appeared to fill the whole lower abdomen, extending above the navel. In the course of the conversation she remarked to me how curious it was that she should have lived so long with such a tumor. I explained to her that there was a great difference in abdominal tumors; that some were of rapid growth, and therefore quickly fatal if left to themselves, citing ovarian tumors as examples, while others were of very slow growth, and but rarely fatal, instancing fibroid tumors of the uterus, such as hers was. She asked if I thought it was a solid tumor of the womb itself, and not connected with the ovaries. I replied, that there could be no reasonable doubt that such was the case. She gave no evidence of being surprised, and I did not then know that she had ever been told that she had an *ovarian* tumor. I learned afterward, that when I left she went to a friend and expressed the greatest astonishment at what I had told her.

Her fatal attack of illness, lasting about three months, came on after she had spent most of a day at a fair, where she was upon her feet much of the time—afterward riding a number of miles to her home. She felt, at the

time, that she had done too much. She was soon after taken with abdominal pain and tenderness, and symptoms such as might accompany peritonitis. After a while a large effusion took place into the abdominal cavity. The increased distention gave her much distress, and interfered with respiration, and her physician, Dr. Brick, used an aspirator, and drew off a large quantity of fluid with considerable relief, but she gradually failed, and finally died very quietly, having previously made the request that I should make an examination of her body, in order that if anything should be learned from it, other sufferers might in the future have the benefit of the knowledge thus obtained.

Feeling that the post-mortem examination should be in the hands of a competent pathologist, I requested Dr. Blodgett to make it, and he has written out the following account of what he found.

Autopsy, twenty-one hours post-mortem.—The body is that of a tall, well-nourished person. Rigor mortis not well pronounced. The general appearances give no evidence of prolonged suffering. Limbs generally well developed; face somewhat emaciated. Lower extremities moderately œdematous, particularly below the knees; upper extremities free from œdema. Upon surface of body generally more or less extensive livores, most marked upon dependent surfaces. Two centimetres ($\frac{3}{4}$ inch) to right of umbilicus is a surface of cicatricial skin which extends 7.5 cm. ($3\frac{1}{8}$ in.) toward the pubes, and has a breadth varying from 4 cm. ($1\frac{1}{2}$ in.) to 8 cm. (3 in.). The skin is smooth and tense at this part. The cicatrix is not of recent date. Below is a small red spot covered with plasters, where, it is said, paracentesis was performed twenty-four hours before death. Abdomen is enormously distended, presenting almost the figure of a hemisphere, the axis of which would be a line drawn from the ensiform appendix to the symphysis pubis. Through the abdominal parietes a large solid mass can be felt, which occupies the whole of the lower part of the cavity of the abdomen and extends upward to a point half way between the umbilicus and ensiform cartilage, where there is an interval of distinct fluctuation, which is most perceptible in a line across the upper part of the abdomen. Nearer the ensiform appendix, fluctuation is no longer detected, the feeling being as if a soft solid were yielding before the pressure of the fingers. The liver cannot be felt, and percussion is unsatisfactory. The following are the measurements around the body: At the waist, 92.5 cm. (36 in.); at level of umbilicus, 121.5 cm. ($47\frac{5}{8}$ in.); between umbilicus and pubis, 122 cm. ($47\frac{7}{8}$ in.); from umbilicus to ensiform cartilage, 28 cm. (11 in.); from umbilicus to pubis, 30.5 cm. ($11\frac{3}{4}$ in.); from umbilicus to anterior superior spinous process of right ilium, 33.5 cm. (13 in.); from umbilicus to anterior superior spinous process of left ilium, 28.5 cm. ($11\frac{1}{8}$ in.).

Panniculus adiposus thick, and the tissues generally quite moist. Muscular portion of abdominal wall very much attenuated and seemingly atrophied. Parietal peritoneum thickened almost to the density of fascia, feels brawny, and offers considerable resistance to the knife. Upon opening the abdomen a quantity, estimated at 3.5 litres ($3\frac{1}{2}$ qts.), of bloody serum escaped from its cavity. Diaphragm is very much thickened and quite dense and firm in all parts, the muscular portions greatly hypertrophied, the concavity very much exaggerated, reaching on the right side to the third rib, on the left side to the third intercostal space. The internal surface of the peritoneum is covered with numerous hard, firm, rounded prominences, which are either attached by a flat surface to the peritoneum, or are, to a greater or less extent, pediculated and projected into the peritoneal cavity.

They are generally of a rosy color and of an uniform consistency. A portion of peritoneum, about 10 cm. ($3\frac{7}{8}$ in.) in diameter, situated midway between the umbilicus and the anterior superior spinous process of the right ilium, is covered with recent shaggy lymph, and at one point upon its surface is an adherent blood coagulum 2 cm. ($\frac{3}{4}$ in.) in diameter and 1 cm. ($\frac{3}{8}$ in.) in thickness, which apparently followed the operation of paracentesis, and is at present in a state of partial disintegration. Upon the left side is a tuft of about thirty separate filiform processes, which are attached separately to the peritoneum at a point half way between the umbilicus and the axillary line, and extend to the surface of the pelvic growth to be presently described. The seat of attachment of these filamentous adhesions is a surface of about 8 square cm. ($3\frac{1}{8}$ in.). The stomach is not visible, but is found in a position downward and backward from its normal situation in the immediate neighborhood of the spleen. The small bowel occupies a space of about 15 cm. ($5\frac{7}{8}$ in.) by 25 cm. ($9\frac{7}{8}$ in.) surface just below the ensiform appendix, and is much compressed. The surface of the bowel is dotted here and there with small nodular growths, similar to those observed upon the peritoneum. The liver is thickened and elongated, extending far into the left epigastric region, is of somewhat doughy consistency and of grayish, reddish-brown color. Upon being incised, tracings of fatty degeneration of the portal sections of the acini are observable, together with hyperæmia and pigmentation of those portions of the acini surrounding the ultimate branchings of the hepatic vein. The capsule of the liver is at some points thickened, and presents nodules varying in size from a pin's point to that of half a pea, scattered irregularly over its surface, more generally upon the lower aspect of the organ. The spleen presents nothing peculiar.

The whole of the remaining abdominal space is occupied by an enormous growth consisting of a large central mass surrounded by a number of smaller growths attached to its periphery and projecting in various directions from it. The mass in the centre is of roughly ellipsoidal form, presenting a depression in its posterior aspect, in which a portion of the small intestine is accommodated and entirely concealed from view (until the upper portion of the tumor is raised with the hands), and has a transverse diameter of about 20 cm. ($7\frac{7}{8}$ in.), an antero-posterior diameter of about 17 cm. ($6\frac{3}{4}$ in.), and a height of about 25 cm. ($9\frac{7}{8}$ in.). Upon the right and left sides are excrescences in great number from 5 cm. (2 in.) to 15 cm. ($5\frac{7}{8}$ in.) in diameter. These are most abundant behind and upon the left side, where they completely fill up the left iliac fossa. No trace of bladder, uterus, or rectum can be seen. The inguinal glands of both sides are enlarged and indurated, and the femoral vessels are accompanied in their way to the thigh by a dense funicular mass of tissue with bulbous enlargements scattered along its course.

Owing to extensive adhesions between the tumor and the pelvic organs, particularly on the posterior surface, the whole of the mass was now removed from the body, together with the abdominal blood-vessels, glands, kidneys, spleen, rectum, vagina, bladder, and ovaries, and was placed upon a table where the relations of the parts could be more carefully studied. The bladder was first laid open by an incision extending from the urethra to the fundus. The organ was of moderate size and contained no urine. No sacculations or other signs of vesical disease were observed, excepting a moderate injection of the smaller blood-vessels about the neck. The orifices of both ureters were found at the proper points in the bladder, and a flexible probe passed readily throughout the whole length of each. The vagina is about 13 cm. (5 in.) deep, quite narrow

and tense. The finger inserted in it can detect nothing resembling cervix or os, but is arrested by a firm hard wall. Upon laying the vagina open, a linear fissure is discovered in its deepest portion, into which a probe can be passed in a sinuous direction, a distance of about 7 cm. ($2\frac{3}{4}$ in.). The main direction of the canal is forward and toward the left side. Upon cutting the growth so as to expose the canal, this is seen to be the cavity of the uterus, and can be followed to a depth of 15 cm. ($5\frac{7}{8}$ in.). In its course lay an elongated mass of thick gelatinous mucus of greenish-yellow color and tenacious character, and at the deepest portion of the canal are found two or three soft jelly-like mucous polypi which nearly fill its cavity, and are attached by small pedicles to its lining membrane. To the right and left of the uterine cavity the mass swells to a large tumor, upon the surface of which are numerous protuberances of various sizes, from that of a marble to that of an infant's head. The cut surface also shows numerous hard nodules of globular form, which are included in the mass and can be easily separated from the body of the growth. Upon its posterior aspect the tumor gives off many accessory growths, one of which extended deeply into the cul-de-sac of Douglas and pressed firmly upon the perineum between the rectum and vagina. Between the last mentioned portion and the main body of the growth are found, on each side, the ureters, each ureter lying much higher in the pelvis than the new growth, and closely applied to it, but not included in it. After long search the ovaries were found in a position upward, outward, and forward from this region. The left ovary is much encroached upon by a cystic formation of the size of a hen's egg in the broad ligament. The ovary itself seems to be in fairly normal condition. The left Fallopian tube is found and traced for a distance of 12 cm. ($4\frac{3}{4}$ in.), at which point it is lost in the tissues about the tumor. It is pervious until it reaches this point, where no further canal can be discovered. The right ovary is the seat of numerous small cysts containing a clear, glairy fluid. One well-marked relic of menstruation was discovered. The right Fallopian tube cannot be found.

Upon incising the tumor more freely, so as to follow the course of the uterine canal to its extremity, the median orifices of both Fallopian tubes are found, and both are pervious as far as the point where they emerge from the tumor, at which place there is atresia of both tubes for the space of 0.5 cm. ($\frac{1}{4}$ in.); beyond this point both tubes are again pervious. The left tube measures 20 cm. ($7\frac{7}{8}$ in.), the right 23 cm. (11 in.) from the surface of the tumor to the fimbriated extremity. Several large calcareous masses are found in various parts of the tumor, some of which seem to have resulted from extensive central calcification of certain nodules of the new growth, while in other parts the hard masses are made up of numerous small distinct nuclei of separate calcification. In many parts of the tumor, the true uterine muscular tissue is still found, while in other parts it cannot be detected. A large soft nodule, 15 cm. ($5\frac{7}{8}$ in.) in diameter, springs from the right side of the tumor at its posterior part, and upon being incised proved to be a *false aneurism* of 13 cm. ($5\frac{1}{8}$ in.) diameter, the wall of which is composed of uterine muscular tissue, and which is filled with blood. That portion of the clot which is in apposition with the wall of the sac, presents the appearance of having been effused at some considerable period previous to the death of the patient, and is partially organized and quite adherent to the wall of the sac. The central portion of the mass is occupied by a large soft clot of recent blood. Large vessels can be traced in the wall of the sac, but no communication can be discovered with the mass in the centre. Upon carefully turning out the clot from the median half of the sac, a large calcareous mass is found at its base, which protrudes to a moderate extent

into the cavity of the sac. Upon one side of this mass is a true aneurism of one of the larger vessels, of flattened shape, 3 cm. ($1\frac{1}{8}$ in.) long, 1 cm. ($\frac{3}{8}$ in.) broad, and 0.5 cm. ($\frac{1}{4}$ in.) deep. From the aneurism, blood-vessels pass in various directions, and two are discovered which open by torn and ragged extremities into the large sac before mentioned. A probe passed into either of these vessels emerges in the central clot of the large sac. This was afterward shown to the late Dr. Jackson, who pronounced it a remarkably exceptional occurrence, and said that in his large experience he had never observed a similar instance in connection with a fibroid tumor.

The rectum is flattened and closely applied to the pathological growth, to which it is firmly bound by connective-tissue adhesions. At the situation of the sigmoid flexure it is forced into the shape of the letter U; its calibre is much diminished, and in some parts almost obliterated. Above this portion the bowel is moderately distended with feces, and seems to be in normal condition. The lumbar glands are bound firmly together about the celiac axis, and are adherent to the posterior aspect of the tumor. The blood-vessels are not noticeably affected, and are pervious. The blood-supply to the pathological growth is mainly from branches of the internal iliac arteries, though other sources of nutrition may have existed. The kidneys were found in their normal relations to the aorta, and were carefully separated, leaving only the ureters attached. These were followed downward and outward around the sides of the morbid growth, where they lay in intimate relations with it, but are not included in its structure. Both ureters are pervious, and show no signs of disturbance of function from the proximity of the diseased growth.

Microscopical examinations of different portions of the foreign growth reveal a varying structure. The original tumor, in which the tissues of the uterus are found imbedded, is formed of dense connective tissue. Bundles of this tissue, with spindle-shaped cells, run in different directions, interlacing so as to form a close, firm structure, presenting the well-known appearances of an ordinary fibroid of the uterus. Some of the newer portions situated upon the periphery of the original growth possess the same structure, but others are composed of connective-tissue cells of varying shape and of large size, with large nuclei, provided with only a scanty intercellular substance, from which they easily separate, and float about in the field of the microscope, thus presenting a character not belonging to the structure of fibroid, but peculiar to sarcomatous growths. In many of the nodules projecting from all parts of the original fibroid the histological structure is so decidedly sarcomatous, that, judging from these portions alone, no one would suspect fibroma. The lymphatic glands of the lumbar plexus are enlarged and present the appearances of sarcomatous growth above described. The bronchial glands are affected in a peculiar manner: certain of them present only the ordinary structure and size of these glands, and are pigmented in the usual manner. Others are found in the immediate vicinity which are much enlarged, some being double the size of their neighbors, and these upon section show the original pigmented gland in the centre, surrounded by a layer of varying thickness of a white color, which presents, under the microscope, the same general appearances as the sarcomatous growths in the pelvis, and are evidently of metastatic origin. Scattered through the pulmonary structure, more generally in the lower lobes, are numerous nodules of a similar structure. These are firm, white or whitish-yellow, and vary in size from that of a pin's head to that of half a pea. Throughout the whole abdomen are countless pendulous masses attached to the viscera, to the omentum, to the ligaments of the liver, to the surface of the bowel in its course, and to the whole upper part of the parietal

peritoneum. These growths vary in size from that of a pea to that of a grape, are of somewhat irregular shape, of whitish-gray color, and prove to be of still another histological structure. They are made up of round cells, and surrounded by a capsular layer of varying density, and are good examples of *granulation tissue*, such as is found in the indurated base of chronic ulcers, and is also the medium of new formation in the healing of wounds. These excrescences seem to have resulted, not from any infection from the tumor, but from the long-continued irritation caused by its presence, and resemble the papillary growths sometimes seen in other parts of the body as the result of chronic inflammatory action. The kidneys were apparently normal, as were the remaining abdominal organs. The heart was not noticeably diseased. A considerable amount of fat was deposited on and about it, but not more than the amount corresponding to the corpulence of the individual. The valves are all in a healthy condition. The head was not examined.

In these days of operative interference the full history of such a case, left to run its natural course, is interesting, particularly so in this instance, on account of the rare conditions revealed by the autopsy.

In former times, uterine fibroids were pretty generally looked upon as of a malignant nature and confounded with "cancer," especially when they grew to very large size. More lately, since their benign character has been understood, many distinguished authorities have held to the opinion that they were never the seat of primary malignant degeneration, and there has been considerable discussion upon this point. At present, although the possibility of such degeneration is generally accepted, its rareness is denied by no one. There are but few well-authenticated cases on record. From the post-mortem appearances in this case there seemed no doubt that the primary change began in the uterine mass, the changes found elsewhere being secondary in character.

The finding of the false aneurism in such a growth was entirely unexpected. That it should have attained such a size when its walls were formed of firm, dense, uterine tissue, is remarkable, and only to be explained by remembering that the principle of hydraulics utilized in the hydraulic press must have come into play here up to the time of the coagulation of the effused blood.

On abdominal palpation after death, I was surprised to feel the large mass formed by the aneurism, supposing at the time that it was an irregularity of the fibroid, and wondering why, in feeling of the tumor in my examination some months before, I had not at once detected it, as then there was apparently no water in the abdominal cavity, and the surface of the growth could be plainly felt. On explaining to an intimate friend of the deceased, who was with her constantly during her sickness, what was found at the autopsy, she at once asked if the aneurism would not account for the fact that the pain was always worse on the right side, and told me that the patient, during her sickness, often spoke of a strange "swashing" sensation at that point, saying that that was the only word which seemed to at all express the feeling. It therefore seems likely that the aneurism formed, and became filled with the clots found in it, during her last illness.

It is also worthy of notice that, with such a large, irregular fibroid, the woman never suffered with dysmenorrhœa; the menses were regular; metrorrhagia never occurred. Notwithstanding the encroachment upon the calibre of the rectum, there was never constipation, and in spite of their position between masses of the growth, the ureters were not obstructed and the kidneys remained healthy.

It is interesting to consider what might have been the result if, previous to her last sickness, an attempt had been made to remove the uterine mass by the operation of hysterotomy, made popular of late years by the publication of the treatise of M. Pean, of Paris. The fact that with the exception of the tuft noted by Dr. Blodgett in his autopsy record, and which might have been easily separated, there were no adhesions *above the pelvis*, would very likely have induced the operator to go so far in attempting to separate those found *in the pelvis*, that before he was convinced the operation was not feasible, he would, perhaps, have inflicted an amount of damage incompatible with the recovery of the patient.

Again, supposing that the operator had succeeded in separating the pelvic adhesions, that portion of the growth which intruded upon Douglas' cul-de-sac lay so much lower in the pelvis than did the ureters, and the latter were in such intimate relation with the mass, that one or both of them might easily have been injured in the removal of the tumor.

This latter danger is not an imaginary one. I have myself seen the accident happen at the hands of a well-known operator. The case is reported in the *American Journal of Obstetrics* for August, 1876, but no mention is made of the autopsy or this fact disclosed by it. In this case the tumor weighed fifty pounds, and was of such rapid growth that it was at first thought to be ovarian. As in the case we report, there had been little or no leucorrhœa, no dysmenorrhœa, and, up to its cessation, one year before, perfect regularity of the menstrual function. The flow, however, had usually lasted but three days, and been scanty during that time. The patient's sufferings arose simply from the weight of the tumor. She was able to walk about, had a good appetite, and good digestion.

At the operation there were found pretty general adhesions at the upper part of the growth, which were easily separated. Luckily, there were no firm adhesions in the pelvis. Finally, the mass having been raised by assistants, the pedicle, consisting of the vagina and adjacent tissues, was ligated and cut, and the tumor removed. The patient, after rallying from the operation, soon began to show symptoms of internal hemorrhage, and next day the abdomen was again opened, cleansed of much effused blood, and a vessel, which had been torn in separating adhesions, was found bleeding and tied. The patient being very low, transfusion was attempted without result. The next day transfusion was again done, but with no perceptible effect, and the patient died.

At the autopsy considerable effused blood was found in the abdominal cavity, probably having come from other vessels torn in separating adhesions. A loop of the left ureter was found included in the ligature which had been tied about the upper part of the vagina. The ureter above the part was very much distended, and the corresponding kidney in a state of acute disintegration.

The operator, Dr. Thomas, in the last edition of his well-known textbook, mentions the case twice in the chapter on uterine fibroids. At one place, in speaking of the size to which such tumors grow, he simply states, without further particulars, the fact that he has "removed one with uterus and both ovaries" weighing fifty pounds. Twenty pages further along, a foot-note to a table of statistics in which the case is tabulated as fatal, gives the same information. There is no reference to the injury to the ureter, nor is the liability to this accident included in his mention of the dangers of removal of fibroid uteri by gastrotomy. Thus the only particularly instructive point about his case is not brought out. Curiously enough, the chapter closes with the sound remark, "gastrotomy should be performed only when life is in jeopardy."

